

1 ABSTRACT

2 This invention concerns optimal ad selection for Web pages by selecting and
3 updating an attribute set, obtaining and updating an ad-attribute profile, and optimally
4 choosing the next ad. The present invention associates a set of attributes with each
5 customer. The attributes reflect the customers' interests and they incorporate the
6 characteristics that impact ad selection. Similarly, the present invention associates with
7 each ad an ad-attribute profile in order to calculate a customer's estimated ad selection
8 probability and measure the uncertainty in that estimate. An ad selection algorithm
9 optimally selects which ad to show based on the click probability estimates and the
10 uncertainties regarding these estimates.